

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

MIDWAY MFG. CO., a corporation,

Plaintiff,

vs.

ARTIC INTERNATIONAL, INC.,
a corporation,

Defendant.

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80 C 5863

H. STUART CUNNINGHAM, CLERK
Judge Decker DISTRICT COURT
UNITED STATES DISTRICT COURT

PLAINTIFF'S PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW

FINDINGS OF FACT

1. This is an action for infringement of copyrights in violation of 17 U.S.C. Section 101 et. seq., trademark infringement and unfair competition at common law, violation of Section 43(a) of the Lanham Act of 1946, as amended, 15 U.S.C. Section 1125(a), violation of the Illinois Deceptive Trade Practices Act, Ch. 121-1/2 Ill. Rev. Stat., Par. 312 (1975) and misappropriation at common law.

The Parties

2. At all times material, plaintiff, Midway Mfg. Co. ("Midway") is and has been an Illinois corporation with its principal place of business at Franklin Park, Illinois.

3. At all times herein mentioned, defendant Artic International, Inc. (hereinafter "Artic") has been, and now is,

a New Jersey corporation with a principal place of business at 550 Route 22, Bridgewater, New Jersey. Shih-Ming Huang is the president and major stockholder in Artic. (PX 81, p. 38) (APP. II. Q.)

4. Defendant has been transacting business, including the acts complained of herein, in this District. (PX 81, pgs. 118-119, 122-123, 132-133, 142-154) (APP. II. Q.)

5. Midway is a nationally recognized designer, manufacturer and seller of high quality coin-operated electronic video games. The bulk of Midway's business consists of manufacturing and selling video games. (Jarocki aff., par 2). In the United States Midway sells its video games to regional distributors who in turn sell the video games to operators. The operators then place the machines in arcades and other public places. (Jarocki aff., par. 2; Tr. 110-111) (APP. I.)

6. Each of Midway's video games (including the GALAXIAN and PAC-MAN games) consists of a cabinet having controls and which contains electronic circuitry in the form of a printed circuit board which is electrically connected to a television picture tube which serves as a screen upon which the visual images of the game are shown. (Jarocki aff., par. 3; Tr. 32, PX 12, 13, 13A, 14, 15) (APP. I.)

7. Prior to the insertion of a coin, Midway's GALAXIAN and PAC MAN video games operate in a repeating

"attract" mode which is stored in the components of the printed circuit boards and which summarizes the game for prospective players. (Jarocki aff., par. 3; Tr. 33-34; 37). When a coin is deposited and the start button is depressed, the PAC-MAN and GALAXIAN games shift into the "play" mode in which some of the playing symbols or images on the screen appear to respond to operation of the controls by a player and sounds emanate from the game. (Jarocki aff., par. 3; Tr. 35-38, 43) (APP. I.)

8. In general, many video games made by Midway and other manufacturers, including the PAC-MAN and GALAXIAN video games, contain printed circuit boards which are "loaded" with electronic components which cause the images of each game to be seen on the screen and generate the sounds of each game. These components include a microprocessor, which is a small computer processing unit (TR 44), and computer chips called ROMs (TR 35; 36). The term ROM is an acronym for "read only memory", and it is a device which contains a computer program in a permanently stored manner. (TR 33, 36; 42)

9. The Midway GALAXIAN printed circuit board was viewed by the Court at the hearing. It is a two-tiered board which consists of a relatively large "mother board" (PX13; PX22) having a relatively smaller "piggyback memory board" (PX13A:PX23) (hereinafter "the GALAXIAN piggyback board") mounted on its upper side. The mother board contains a microprocessor (computer) and two "character ROMs", which

contain the images displayed on the television monitor. (PX 13; TR 34-36, 40-41) (APP. II. E.)

10. The Galaxian piggyback board has five ROMs on its upper side and two sets of twenty four pins descending from its lower side. The pins fit into sockets which are located on the GALAXIAN mother board and situated in such a manner that the pins electrically connect the ROMs on the piggyback board to the microprocessor located on the mother board. (PX22,23). The ROMs of the GALAXIAN piggyback board contain permanently imprinted instructions in the form of computer programs which direct the microprocessor to cause the images contained in the character ROMs to appear in certain locations on the screen in the GALAXIAN game. (TR 8-10, 32-33, 40-41, 92, 96-97) (APP. II. E.)

11. When the GALAXIAN game is in the attract mode (prior to the insertion of a coin by a player) the repeating predetermined sequence of images which summarizes the game for the player are generated by the instructions which are fixed in the program ROMs. (TR 34-35)

12. When the GALAXIAN game is placed in the "play" mode by the deposit of a coin, the images contained in the character ROMs are moved on the screen in a finite but enormous number of sequences which are predetermined by the instructions in the instruction ROMs. In other words, when the player moves the controls on the cabinet, an electric signal is sent to the

microprocessor, which scans the instruction ROMs to obtain the instructions for the predetermined sequences in which the images are to "move" on the screen. (TR 37-41) In like manner, the instruction ROMs cause sounds to emanate from the game as it is played. If a player would move the controls of either a GALAXIAN or PAC-MAN video game in exactly the same way in two different plays of the game, the images on the screen would move in exactly the same way. (TR 40)

13. Midway's PAC-MAN video game also has a printed circuit board which has instruction ROMs and character ROMs, and the principles of operation of the PAC-MAN game are identical to those discussed above for the GALAXIAN game. (TR 43)

14. The Court finds as a matter of fact that the audiovisual works in the GALAXIAN and PAC-MAN video games, i.e., the images on the video screens and the associated sounds emanating from the games, are fixed in the printed circuit boards of the games.

Midway's Acquisition and Ownership of the United States Rights in the GALAXIAN and PAC-MAN Video Games

15. Both the GALAXIAN and PAC-MAN video games were created by Namco Limited, a Japanese Company. (PX 1, 3, 6) (APP. II. A.) The GALAXIAN video game was created by Namco in 1979, and was first published in Japan by Namco on September 15, 1979 (PX 1, 3). The PAC-MAN video game was created by

Namco in 1980 and was first published in Japan under the name PUCKMAN on May 27, 1980. (PX 6) (APP. II. A.)

16. Midway first became aware of Namco's GALAXIAN video game at a private showing at Namco's offices in Tokyo on October 17, 1980 (Jarocki Aff. ¶5). It was apparent to Midway's management upon first viewing the GALAXIAN video game that it contained distinctive and highly marketable features. (Jarocki Aff. ¶5) (APP. I.)

17. Midway first became aware of Namco's PUCKMAN video game in Japan on August 13, 1980 (Jarocki Aff. ¶15). (APP. I.) Midway concluded that the PUCKMAN video game was unique and had potential for commercial success in the United States (Jarocki Aff. ¶15). Upon acquiring the rights to market this game in the United States, Midway obtained Namco's agreement that the PUCKMAN could be marketed under the trademark "PAC-MAN". (PX 11) (APP. II. D.)

18. On November 13, 1979, Midway and Namco entered a know-how license agreement in which Namco granted Midway an exclusive license to make and sell the GALAXIAN video game in the United States. (PX 10) (APP. II. C.)

19. On February 2, 1980, Namco assigned to Midway, effective as of November 13, 1979 (the date of the license agreement) "the entire right, title and interest in common law and statutory copyright" in the GALAXIAN video game in the United States. (PX 5) (APP. II. A.)

20. The November 13, 1979 GALAXIAN agreement has been amended several times and is still in effect (PX 10). In one of the amendments, Namco specifically assigned to Midway any rights it had in the GALAXIAN trademark. (PX 10; Doc. 02) (APP. II. C.)

21. On August 16, 1980, Namco assigned the U.S. Copyright rights in the "PAC-MAN or PUCKMAN" video game to Midway. (PX 8) (APP. II. A.)

22. On November 4, 1980, Midway and Namco entered into a formalized know-how license agreement in which Midway received the exclusive rights to market the game in the United States under the name PAC-MAN (PX 11). Namco assigned any rights it had in the PAC-MAN and PUCKMAN trademark rights to Midway in the November 4, 1980 agreement (PX 11, Doc. 1338, par. 2(a)). The PAC-MAN agreement has been amended several times and is still in effect. (APP. II. D.)

23. Midway has paid substantial royalties to Namco under both the GALAXIAN and PAC-MAN agreements (Jarocki Aff. ¶8). (APP. I.)

24. Midway has agreed to reassign to Namco the rights to the GALAXIAN and PAC-MAN video games (1) at any time more than 180 days after the termination of the agreement and (2) upon a written request by Namco for the return of those rights. (PX 10, 11) (APP. II. C., D.)

Midway's Marketing of the
GALAXIAN and PAC-MAN Video Games

25. Since February, 1980, Midway has sold in excess of over 40,000 GALAXIAN video games, and since October, 1980, Midway has sold in excess of 80,000 PAC-MAN video games (TR 112). Historically, the average production run of a video game was on the order of 1500-2000 units. (TR 111)

26. Each GALAXIAN and PAC-MAN video game sold by Midway contains several copyright notices. In the GALAXIAN video game, one of the copyright notices appears on the glass cover over the video screen and is in the form of a clear decal (PX 12). In the PAC-MAN video game, one copyright notice appears electrically on the video screen immediately after a coin is deposited (PX 14, TR 132; 147). In addition, the notice "© Midway" appears on the GALAXIAN printed circuit board (PX 13, TR 133) and the notice "© Midway 1980" appears on the PAC-MAN printed circuit board and on each of its ROM's. (PX 15; TR 121, 122)

27. Each of Midway's GALAXIAN and PAC-MAN games prominently displays the marks GALAXIAN and PAC-MAN as well as Midway's name. (TR 120; PX 12, 14)

28. The Court viewed Midway's GALAXIAN game at the hearing. The elements of the GALAXIAN video game appear on a background star pattern consisting of twinkling colored lights that roll from the top of the screen to the bottom. The game

involves the missile-firing rocket ship operated by the player, plus a formation of enemy "aliens". The aliens are arranged in a convoy of five horizontal rows. There are four denominations or ranks of aliens, with the highest ranking nearest the friendly ship. Each rank has a distinguishing color. The highest ranking alien ship is shaped like a rocket ship, but the other ranks have flapping wings. The entire alien convoy shifts in a horizontal swing during the action of the game. Individual aliens unpredictably invert and swoop down to bomb the friendly ship. Sometimes the alien attack involves miniformations of up to three aliens, involving the alien flagship or chief, as well as flying alien escorts. Whenever a ship is destroyed, a bright "explosion" appears on the screen, with appropriate sound effects. There are two back-up ships that the player uses after this first ship is destroyed by alien bombs. The player's score is measured by the number and rank of aliens destroyed. A greater score is achieved from destroying an alien that is attacking, rather than an alien that is in place in the convoy. A "mystery score" is achieved for destroying high ranking aliens. The first player's running score appears in the upper left corner of the screen. If there is a second player, his score appears in the upper right and the high score appears in the upper middle of the screen. In the lower right, the number of alien convoys destroyed is recorded and, in the lower left, the number of friendly

spaceships remaining in reserve for use when the alien attackers destroy the firing rocket ship is displayed. (PX 12; TR 141-144) (APP. V.)

29. The Court viewed Midway's PAC-MAN video game at the hearing (PX 14; TR 145-148). The PAC-MAN (or PUCKMAN) video game requires the player, using a single hand control, to guide the PAC-MAN image about a maze to score points by munching up dots in his path. Four ghost monsters, Inky, Blinky, Pinky and Clyde, chase after the PAC-MAN trying to capture and deflate him. The PAC-MAN can counterattack by eating a big power capsule that enables him to overpower the monsters for additional scores. After all the dots are gobbled up, the screen is cleared, and the PAC-MAN game continues for another round. Each round or rack features a special fruit target in the maze, which if eaten earns bonus points. A player starts with three PAC-MAN images. An additional PAC-MAN image is awarded for scoring 10,000 points. Special audio and musical effects accompany the play of the game. (TR 145-148; PX 14)

30. Midway has extensively advertised and promoted the GALAXIAN and PAC-MAN video games. Midway's standard procedure for marketing a new video game includes distributing thousands of brochures for the game to each of Midway's United States distributors (Jarocki Aff. ¶8; TR 117-118; PX 46, 47). (APP. I.) Each brochure is in full color, and contains

prominent displays of the name of the game and explicit pictorial and graphic representations of the visual elements of the game (PX 46, 47; TR 117). These brochures, in turn, are used by the distributor to advertise and promote the new game to the distributor's customers, who are generally operators (Jarocki Aff. ¶2; TR 110, 111, 117). Midway uses the brochures as advertisements in trade magazines, such as Replay, Play Meter, Vending Times, Market Place and Cash Box, and also sends out press releases concerning the games (Jarocki Aff. ¶21; TR 112, 117; PX 46, 47). Midway promotes its new games at national and local trade shows. (Jarocki Aff. ¶9, 12) (APP. I.)

31. In addition to Midway's promotion of the games in this country, the GALAXIAN and PAC-MAN video games have been promoted in Japan by Namco, and each of these games has been exhibited by Namco at the Japan Association Trade Show in Tokyo, Japan (Jarocki Aff. ¶ 19). (APP. I.)

32. Midway has received unsolicited letters from members of the public specifically mentioning the GALAXIAN and PAC-MAN video games by name. (PX 49; TR 124-125) (APP. II. I.)

33. Midway's GALAXIAN and PAC-MAN video games have been the subject of unsolicited news stories which have identified Midway as the source of the GALAXIAN and PAC-MAN video games (TR 126; PX 48). Midway placed into evidence selected clippings of printed news stories which were collected for Midway by a clipping service. (TR 127; PX 48) (APP. II. H.)

34. Midway's PAC-MAN video game has been the subject of several television broadcasts, which were tape recorded on video tape and edited by Midway's advertising agency in a video tape called "Midway In The News". (TR 127-128; PX 50) (APP. II. J.)

35. Replay and Play Meter, two trade magazines for the video game industry periodically publish the results of polls of video game popularity. Midway's GALAXIAN and PAC-MAN video games have been very highly ranked in such polls (TR 113-115; PX 52-57). These polls identify Midway as the manufacturer of the GALAXIAN and PAC-MAN video games. (Id.) (APP. II. K.)

36. The Court concludes as a matter of fact that the names GALAXIAN and PAC-MAN have acquired a secondary meaning and that Midway is identified by the public as the source of video games bearing those trademarks.

37. The video portions of the GALAXIAN and PAC-MAN video games contain design features which are non-functional and distinctive. The numerous characters in the GALAXIAN and PAC-MAN video games have been given unique shapes and coloring which can only be described as arbitrary embellishments, not essential to the games' operation. The characters of the GALAXIAN and PAC-MAN games are fanciful creations having no counterparts in reality. These characters could be given any imaginable shape without changing the basic character of the game.

38. The distinctive and non-functional design features of the GALAXIAN and PAC-MAN games have acquired a secondary meaning.

Registration of Midway's Copyrights
in the GALAXIAN and PAC-MAN Audiovisual Works

39. The GALAXIAN and PAC-MAN video games present a series of images on a television monitor and associated sounds. (TR 8; 32; PX 12, 14)

40. Midway initially sought to register the copyright in the audiovisual portion of the GALAXIAN video game in early March, 1980 (ITC TR 514; 515; 518; 523; 679). A Midway attorney initially met with examiners in the Copyright Office visual arts and performing arts groups to determine what would be the proper form of deposit to register the visual images of the game and also to determine what would be the proper form of application (ITC TR 504-506; 511; 512; 514; 516; 528; 558A; 626; 639; 640; 674; 677). After some discussion, the performing arts division examiner agreed that a "PA" or performing arts application should be filed and that an acceptable deposit would consist of a video tape of a performance of the game and a written "Synopsis of Deposit". (ITC TR 517, 526, 528, 609, 678) (APP. III.)

41. During the conversations between Midway's attorney and the Copyright Office examiner, there were some discussions pertaining to the structure of the electronics in

the game and how the images are generated. (ITC TR 515-517, 523-524, 560) (APP. III.)

42. On March 6, 1980, Midway's attorney filed a form PA application to register the GALAXIAN audiovisual work and deposited a video tape, a brochure for the game and other materials including a written "Synopsis of Deposit." Midway also filed a "Request for Special Handling" in order to have examination of the copyright application expedited in order to enable Midway to file suit for infringement of the copyright. (ITC TR 502-503, 508, 598-599) (APP. III.)

43. The Copyright Office granted the application and issued "Certificate of Copyright Registration" No. PA 59-977, effective March 6, 1980. The Certificate states that the work for which copyright is registered is entitled "GALAXIAN" or alternatively "Midway's GALAXIAN"; that the work is an audiovisual work; that Namco Limited is the author the "entire work", that the work was created in 1979, and was first published in Japan on September 15, 1979. The Certificate also states that "Namco Limited assigned the entire right, title and interest in statutory copyright in the United States...in and to a certain amusement game known as GALAXIAN....". (PX 1) (APP. II. A.)

44. The examiner who examined the application which resulted in the grant of Certificate PA 59-977 testified that he viewed the video tape submitted as a deposit. (ITC TR 628) (APP. III.)

45. Midway obtained a Certificate of Copyright Registration No. PA 68-323 specifically for the audiovisual work of the GALAXIAN attract mode (PX 3), which is not included on the video tape deposit for PA 59-977, and also obtained a Certificate of Copyright Registration No. PA 83-768 for the audiovisual work of the PAC-MAN video game (PX 6). Midway submitted a video tape and a written synopsis of the deposit with the application that resulted in each Certificate of Copyright Registration (ITC TR 537-538; PX 4,7). The facts recited in Certificate Nos. PA 68-323 and PA 83-768 are similar in content to those recited in PA 59-977. (APP. II. A.; III.)

46. The Court viewed a copy of the video tape submitted as a deposit (PX 2) for Certificate of Registration PA 59-977 (PX 1). It presents a performance of the play mode of the GALAXIAN video game, and there is a closeup of the TV screen to show the copyright notice. At the end of the tape is a view of the entire game showing the full cabinet bearing Midway's name (TR 208; PX 2). The tape was made by aiming a camera at the television monitor of the GALAXIAN game while it was played. Other than differences in picture quality, the audiovisual work on the tape is identical to the audiovisual work in the GALAXIAN game. The same is true of the video tapes submitted as deposits for the other copyright registrations in suit. The Court thus concludes that the copyright registrations cover the audiovisual works in the GALAXIAN and PAC-MAN video games. (APP. II. A.)

47. In letters to Midway's counsel, Mary Beth Peters, Chief of the Examining Division of the Copyright Office confirmed that on an ongoing basis, the deposit requirements for audiovisual works embodied in video games would consist of a video tape of the attract and play modes of the games, a synopsis of the work, and at least one piece of identifying material showing the position of the copyright notice. (PX 9) (APP. II. B.)

48. Ms. Peters indicated that where the work was first published abroad the video tape could be made using the work as published in the United States, provided that there "are no copyrightable differences between the first published edition and the United States edition". (PX 9) (APP. II. B.)

49. At the ITC hearing, Ms. Peters testified that the slight differences between the Namco editions of the GALAXIAN and PAC-MAN video games and the Midway editions are not copyrightable differences. (ITC TR 602-603) (APP. III.)

50. The Copyright Office's rationale for accepting a video tape as a deposit for the audiovisual work in a video game was expressed by Ms. Peters in a letter dated July 14, 1981:

"The Copyright Office certainly does not want actual video games deposited for registration. Unfortunately, under the present regulations, there is no specific provision for the deposit of audiovisual works embodied in video games. I am, therefore, granting your request for special relief on an ongoing basis." (PX 9) (APP. II. B.)

51. In a subsequent letter dated August 13, 1981 to a law firm that does not represent Midway, Ms. Peters reiterated the above stated rationale and further indicated why the video tape deposit is considered by the Copyright Office to be a suitable form of deposit for application to register a copyright:

"A videotape of the audiovisual work embodied in an electronic video game meets the examination and archival requirements of the Copyright Office. It meets the examination needs because it is visually perceptible and therefore can be examined for copyrightability. It meets the archival needs because it is viewable and certifiable." (ITC RX 4) (APP. III.)

52. The Court finds that Midway did not mislead the Copyright Office in any manner in obtaining registrations for copyrights in the GALAXIAN and PAC-MAN audiovisual works.

53. The Court finds that no fraud was committed by Midway in obtaining Copyright Registration Nos. PA 59-977, PA 68-323 and PA 83-768.

54. The Court finds that the materials Midway deposited in connection with its applications to obtain registration of the copyrights in the audiovisual works of the PAC-MAN and GALAXIAN video games are in accordance with present Copyright Office deposit requirements and also in accordance with Copyright Office Policy in existence as of the time the deposits were made.

55. The Court finds that the images and sounds on the video tape deposits for the GALAXIAN and PAC-MAN video games are identical, except for some minor differences in quality, with the images and sounds of the GALAXIAN and PAC-MAN video games.

Artic's Infringement Of Midway's Rights

56. Artic International, Inc. was formed in December, 1978, by Shih-Ming (Sming) Huang, who is and has been the president of Artic. (PX 81, p. 37-39) Artic initially engaged in the sale of integrated circuit chips. (PX 81, p. 43-44, 64) (APP. II. Q.)

57. Sming Huang first became aware of the GALAXIAN video game in October, 1979, (TR 272) at the 1979 AMOA show in Chicago at the Conrad Hilton Hotel. (PX 81, p. 253) (APP. II. Q.)

58. Sming Huang first became aware of a speed-up kit for the GALAXIAN video game in early 1980. (PX 81, p. 233-234; PX 58) Artic first began to sell speed-up kits for the GALAXIAN game in September 18, 1980. (PX 81, p. 238, 340; PX 65) (APP. II. Q., M.)

59. Artic first advertised its GALAXIAN speed-up kits in September or October of 1980. (PX 81, pp. 110-112, 115-116; PX 58-59) The ad read in part: .

"TRY OUR MEMORY BOARDS TO DOUBLE YOUR GALAXIAN INCOME".
(APP. II. Q., L.)

60. Artic was an exhibitor at the 1980 AMOA show held in Chicago, October 31 - November 2, 1980. (PX 81, p. 118) At the show, Artic distributed a brochure for its GALAXIAN speed-up kit which read:

"Speed up your game, 'speed up your income. Try our memory boards to double your GALAXIAN income."

(PX 81, p. 118; PX 60) (APP. II. Q., L.)

61. Artic received a letter dated October 29, 1980, from Midway's attorneys, advising Artic that it was infringing Midway's rights in the GALAXIAN video game, (PX 81, pp. 263-264; PX 69). On October 31, 1980, Artic was served with a complaint at the AMOA trade show. The complaint charged Artic with infringement of the GALAXIAN copyright and trademark. (APP. II. Q., N.)

62. Artic sold a GALAXIAN printed circuit board with a speed-up kit to Steven Gore at the AMOA show. (PX 81, pp. 142-145, 147-150, 167; PX 16, 17; PX 65) (APP. II. Q., M.)

63. After the complaint was served there were some settlement negotiations. (PX 81, pp. 269-272) During the negotiations, Mr. Huang received a copy of Midway's infringement policy with respect to PAC-MAN. (PX 81, p. 262; PX 68). On or about December 5, 1980, Artic hired Chicago counsel to represent it, and negotiations broke off. (APP. II. Q., N.)

64. In November, 1980, after the suit was filed, Artic changed the ads for its speed-up kit to read: .

"TRY OUR MEMORY BOARDS TO DOUBLE YOUR VIDEO GAME INCOME."

(PX 81, pp. 369-375; PX 71) The other text of the ad was left unaltered. Artic never advertised its speed-up kit for any game by a specific name except for the GALAXIAN game. (PX 81, p. 127; TR 237). The Court concludes from Artic's advertisements that Artic intended to sell the speed-up kit to owners of GALAXIAN games. (APP. II. Q., O.)

65. At a deposition taken on December 18-19, 1980, Sming Huang could only identify one game other than GALAXIAN which could be speeded up by Artic's speed-up kit -- a game called KAMIKAZE. (PX 81, p. 168) A KAMIKAZE game has been held to be an infringement of the GALAXIAN copyright. (See Midway v. Drikschneider, et al.) (APP. IV. B.)

66. Artic has sold upwards of 436 speed-up kits. (PX 62, 64) The bulk of the sales occurred after the institution of this lawsuit. (PX 62, 64) (APP. II. L.)

67. The Artic speed-up kit consists of a relatively small printed circuit board with five EPROMs on the top and with two sets of pin connectors on the bottom. (TR 92, 95-97; PX 16, 19-21). The two sets of connectors are spaced in such a way as to permit them to be plugged into the sockets in the GALAXIAN mother board into which the GALAXIAN piggyback memory

board is normally plugged. (TR 91, 96; PX 26, PX 16) (APP.

II. E.)

68. The EPROMs on the Artic speed-up kit contain a complete set of instructions to cause characters in the character ROMs to move in such a manner as to produce a "fast" GALAXIAN game. (TR 47, 48, 63)

69. In order for the Artic speed-up kit to "speed-up" or modify a game other than the GALAXIAN video game, the Artic P.C. board must be able to plug into sockets of a mother board of another game, e.g., the sockets on the mother board must be spaced in such a manner as to correspond to the pins of the Artic board. (TR 104) In addition, the sockets would have to electrically connect to the address and data lines of the microprocessor. Finally, the programming language used in the EPROMs of the Artic speed-up kit would have to be compatible with the microprocessor on the mother board. (TR 104-105)

70. Both the computer programs in the ROMs of Midway's GALAXIAN piggyback printed circuit board (PX 13A) and the computer programs in the EPROMs in the Artic speed-up piggyback board can be printed out on paper using a standard industry procedure using a machine known as a "development machine." (TR 92-94) The computer programs can be printed out in two forms: (1) "Object code", which is a "machine readable" form, and (2) "source code", which is a "human readable" form. (TR 48-50, 54, 55; PX 44, 45) (APP. II. F., G.)

71. On September 25, 1981, Atish Ghosh made printed versions of the source code stored in the Midway GALAXIAN piggyback board (PX 13A) and the source code stored in the Artic piggyback speed-up board (PX 16). (TR 92-94, PX 44, 45) (APP. II. F., G.)

72. Dr. Thomas DeFanti, a professor of computer science at the University of Illinois, spent eight hours comparing the printed version of the source code of the Midway GALAXIAN piggyback board (PX 44) with the printed version of the source code of the Artic speed-up piggyback board (TR 55-60; PX 45) and found that out of about 10,000 "bytes" (words) of source code, there were only 488 differences between the two programs. (TR 59) Dr. DeFanti concluded "that there is no way a person could have generated ... the Artic GALAXIAN source code without somehow having access to the Midway GALAXIAN source code [I]t is a clear case of copying here." (TR 61) (APP. II. F., G.)

73. The Artic piggyback board contains instructions to cause characters located in the character ROMs to move in a "sped-up" version of the GALAXIAN video game. (TR 62, 63).

74. The Court observed the audiovisual portions of Midway's GALAXIAN game, and compared it to the audiovisual elements produced by a GALAXIAN mother board having the Artic speed-up piggy back board in place of Midway's GALAXIAN memory board. (TR 138-139, 141-144; PX 12, PX 16, PX 17). This Court

had an opportunity to observe that when the Artic speed-up piggyback board is plugged into a GALAXIAN mother board, it produces a faster version of GALAXIAN in which the number of aliens leaving the convoy in miniformations is greater than the number in Midway's GALAXIAN. In the sped-up version of the game, a miniformation of six aliens attacks the base ship at various times, whereas in the Midway GALAXIAN game, the maximum number of aliens in a miniformation is three. The aliens in the sped-up GALAXIAN game also drop more bombs. Otherwise, the audiovisual content is identical to Midway's GALAXIAN video game (TR 144).

75. The defendant demonstrated that the Artic speed-up piggyback board caused the character images of games entitled UNIWARS and MOON CRESTA to move in exactly the same manner as a "sped-up" GALAXIAN game. (TR 239-240, 244-247). In fact, the attract modes of the MOON CRESTA games were substantially changed by inserting the Artic speed-up piggyback board. (TR 246, 268, 271). The Artic speed-up board caused the words "WE ARE THE GALAXIANS" to appear on the screen of both games in the attract mode. (TR 246, 268, 271). It caused the character images of the games to assemble in a formation identical to the formation of the aliens of the GALAXIAN game, and to move in exactly the same way as in the sped-up GALAXIAN game. (TR 239-240, 244-247, 268, 269, 271)

76. At the hearing, Atish Ghosh, an electrical design engineer at Midway demonstrated that it was physically impossible to fit the Artic speed-up kit into the mother boards of the following video games: VENTURE by Exidy; COSMIC AVENGER by Universal; VANGUARD by Century; BATTLE ZONE by Atari; ASTROIDS DELUXE by Atari; SUPER COBRA by Stern; SPACE FURY by Sega; and DONKEY KONG by Nintendo. (TR 95-96, 99-104; PX 27-42) (APP. II. E.)

77. The Court concludes from the evidence presented that the Artic speed-up piggyback board only produces a sped-up version of the GALAXIAN video game, and does not speed-up any other game.

78. The Court concludes as a matter of fact that the Artic speed-up piggyback board is not a staple article of commerce.

79. The Court concludes as a matter of fact that the Artic speed-up piggyback board is a derivative work of the instructions for the movements of characters in Midway's GALAXIAN video game. }

Infringement Of PAC-MAN Rights

80. Artic first became aware of Namco's PUCKMAN game a week earlier than the 1980 Japan Amusement Association Trade show. (PX 82, pp. 19-20; PX 81, p. 255) (APP. II. Q., R.)

81. Artic first sold a PUCKMAN printed circuit board on November 25, 1980. (PX 73) (APP. II. P.)

82. In toto, Artic has sold between about 500 and about 1600 PUCKMAN printed circuit boards. (PX 73, 75, 76) (APP. II. P.) Artic has advertised such printed circuit boards in an ad which reads "We supply P.C. Boards and I.C. Chips for HOT video game machines." (PX 62). PAC-MAN is demonstratably a "hot" video game. (APP. II. L.)

83. Artic imported about 500 PUCKMAN PC boards from a company in Japan. (Artic dep. PX 82, p. 170). The boards were sold as is to customers. (PX 82, p. 188) (APP. II. R.)

84. The Court viewed the PUCKMAN game produced by the Artic PUCKMAN printed circuit board. (TR 149-150). The names of the ghost characters in the game produced by the Artic board are different than the names of Midway's ghost characters, and the Midway copyright notice does not appear on the screen of the game. Also, the game produced by the Artic printed circuit board uses the work "PUCKMAN" rather than PAC MAN. Other than the differences mentioned above, the audiovisual elements of the game produced by the Artic PUCKMAN printed circuit board are identical to the audiovisual elements of Midway's PAC-MAN video game. (TR 149, 150; PX 14; PX 18). Moreover, at the ITC hearing, it was demonstrated that the PUCKMAN printed circuit board contains an error common to Midway's PAC-MAN game. (ITC Confidential Transcript)

85. When Artic first began to sell its printed circuit boards and speed up kits, it wrote the names of the product on its invoices. (PX 73) (APP. II. P.)

86. Sometime in early 1981, after this suit was filed, Artic ceased writing the names of its product on its invoices, and began to use a code designation.

87. SP02 was the code for speed-up kits, (PX 82, pp. 137-138) and A 07 was the code for PUCKMAN printed circuit boards. (PX 82, pp. 69, 117) (APP. II. R.)

88. Sometime in April 1981, Artic decided to cease using its product code for different types of P.C. Boards, and to merely write the term "P.C. board" or its equivalent on invoices for the sale of PUCKMAN P.C. boards. (PX 82, pp. 116, 117) (APP. II. R.)

89. The majority of Artic's sales of the PUCKMAN P.C. boards have taken place after the amended and supplemental complaint was filed on December 10, 1981. (PX 73, 75, 76) (APP. II. P.)

90. Artic sells printed circuit boards for about thirty different types of games. (PX 82, p.80) (APP. II. R.)

91. The sale of speed-up kits is not a very substantial part of Artic's business. (PX 82, pp. 155-156) (APP. II. R.)

92. The Court finds that Midway is suffering irreparable harm as the result of the sale by Artic of GALAXIAN speed-up kits and PUCKMAN printed circuit boards.

CONCLUSIONS OF LAW

1. The Court has jurisdiction over the parties and the subject matter. 28 U.S.C. §1338, 15 U.S.C. §1121.

2. This action is before the Court on Midway's Motion for Preliminary Injunction.

3. A preliminary injunction should be granted where the movant has demonstrated (1) likelihood of success on the merits, (2) irreparable harm if the injunction is not issued, (3) that the balance of hardships tips toward the plaintiff, and (4) granting the injunction is in the public interest. See Banks v. Trainor, 525 F.2d 837, 841 (7th Cir. 1974); Helene Curtis Industries, Inc. v. Church & Dwight Co., 560 F.2d 1325, 1330 (7th Cir. 1977); In re Uranium Antitrust Litigation, 617 F.2d 1248, 1261 (7th Cir. 1980).

A. Likelihood Of Success On The Merits:

Copyright Infringement

4. Copyright infringement is established by proving two elements: Midway's ownership of the copyright and unauthorized copying (in the form of reproduction, adaptation, public distribution, public performance or public display) by defendants. Sid & Marty Krofft Television v. McDonald's Corp. 562 F.2d 1157, 1162 (9th Cir. 1977); Reuben H. Donnelly v. Guides to Multinational Business, 193 U.S.P.Q. 791, 792 (N.D. Ill. 1976). 3 M. Nimmer, Nimmer on Copyright (hereinafter "Nimmer") Section 13.01, p. 133, and Section 8.02[A], Section 8 21 (1979).

5. Courts have granted temporary restraining orders and preliminary injunctions against infringement of copyrights in the audiovisual works of video games owned by Midway and other legitimate manufacturers. E.g., Midway Mfg. Co. v. Drikschneider et al., 81-0-243 (D. Neb., 7-15-81); Midway Mfg. Co. v. Larry Krukenberg et al. and Sol Tabb et al., 81-320-Orl Civ. Y, 81-321-Orl Civ Y (consolidated) M.D. Fla., 7-8-81); Midway Mfg. Co. v. Sutra Import Corp. et al., Civ. No. 81-438 (D.Ariz. 1981); Midway Mfg. Co. v. Melo Tone Vending, Inc., et al., Civ. No. 81-1486 in (D. Mass. 1981); Midway Mfg. Co. v. KK Industrial Service et al., Civ. No. 81 676 (D. Ariz. 1981); Midway Mfg. Co. v. Imperial Games, Inc., et al., Civ. No. 81-0495 (D. Utah 1981); Midway Mfg. Co. v. Taito Hawaii Corporation et al., Civ. No. 81-0285 (D. Hawaii 1981); Williams v. Artic International, Inc. et al., 81 1852 (D.N.J., 6-24-81); Stern Inc. v. Kaufman et al., 80-C-3248 (E.D.N.Y., 5-22-81); Cinematronics, Inc. v. K. Noma et al., No. Civ. 81-439 PHX-EHC (D. Ariz., 5-22-81). (Copies in Appendix, Tab IV)

6. As recognized by the Fifth Circuit Court of Appeals,

"Preliminary injunctions are a common judicial response to the imminent infringement of an apparently valid copyright." Dallas Cowboy Cheerleaders, Inc. v. Scoreboard Posters, Inc., 600 F.2d 1184, 1187 (5th Cir. 1979).

7. Under the 1976 Copyright Act, 17 U.S.C. Section 101 et seq., a certificate of copyright registration:

"[S]hall constitute prima facie evidence of the validity of the copyright and of the facts stated in the certificate." 17 U.S.C. Section 410(c). See American International Pictures, Inc. v. Foreman, 576 F.2d 661, 665 (5th Cir. 1978); Dollcraft Industries, Ltd. v. Well-Made Toy Mfg., 479 F. Supp. 1105, 1114 (E.D.N.Y. 1978). Midway Mfg. Co. v. Drikschneider et al., supra, slip op. at 12.

8. The pertinent registration certificates establish, prima facie, that Midway owns copyrights in audiovisual works entitled GALAXIAN and PAC-MAN, that the works are original works of authorship, that Namco is the author, and that Namco assigned the copyrights in the works to Midway. (F/F, 43, 46; PX1, 3, 6). Midway Mfg. Co. v. Drikschneider et al., supra, Slip op. at 12, 13. There is no evidence to the contrary.

9. Under section 102 of the Copyright Act, copyright protection subsists in

"original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include ... (6) motion pictures and other audiovisual works." 17 U.S.C. Section 102(a).

10. The evidence clearly shows that the audiovisual works in the GALAXIAN and PAC-MAN video games are susceptible to copyright protection under this standard and in fact are the works protected by the registered copyrights in suit. (F/F 40, 42, 43, 45, 46).

11. The registration certificates for GALAXIAN and PAC-MAN establish prima facie that the work protected is an

"audiovisual work." (F/F 43, 45). Audiovisual works are defined in 17 U.S.C. §101, as

"works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices such as projectors, viewers or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material object, such as films or tapes, in which the works are embodied. 17 U.S.C. §101.

It is the "series of related images" that appear on the television screens of the GALAXIAN and PAC-MAN games and the associated sounds which emanate from the games that constitute the "audiovisual works" in the games. Because the "series of related images ... impart an impression of motion", the audiovisual works in the GALAXIAN and PAC-MAN video games also constitute "motion pictures" as that term is defined in 17 U.S.C. §101.

12. The evidence shows that the Copyright Act requirement that a work be "fixed in a tangible medium of expression" is met. Expert testimony established that the images which appear on the screen of the GALAXIAN and PAC-MAN video games are permanently fixed in "character ROMs" (read only memories) located on the printed circuit boards for the games. (F/F 9). The instructions which cause the images to move on the screen are permanently fixed in a set of "instruction ROMs". (F/F 10). In the attract mode of the games, the images move in a repeating predetermined manner which is always the same. (F/F 11). In the play mode, the

images appear on the screen in a finite (but enormous) number of sequences which are fixed in the instruction ROMs and which are responsive in a limited manner to the manipulation of the game controls by a player. (F/F 12). Expert testimony established that if a player were able to duplicate the exact movements of the controls, the images on the screen would move in exactly the same manner. (F/F 12). This evidence, which is un rebutted, establishes that the GALAXIAN and PAC-MAN audiovisual works are "fixed" in the electronic circuitry of the game, as other courts have recognized. Accord, Midway v. Drikschneider, supra, Slip. op. at 14; Stern v. Kaufman, Slip. op. at 6.

13. The fact that the images appear to move in different sequences each time a game is played is not relevant to the issue of fixation of an audiovisual work. Indeed, it is contemplated in 17 U.S.C. §101 that an audiovisual work may be "performed" by "[showing] its images in any sequence".

14. From the foregoing, it is clear that the audiovisual works in the GALAXIAN and PAC-MAN video games are copyrightable subject matter under 17 U.S.C. §102(a). In addition, it is clear from the evidence that the audiovisual work covered by the copyright registrations is that of the GALAXIAN and PAC-MAN video games. Midway v. Drikschneider, supra, Slip. op. p. 13.

15. Under 17 U.S.C. §106, Midway enjoys the exclusive

rights

- "(1) to produce the copyrighted work in copies...;
- (2) to prepare derivative works based on the copyrighted work;
- (3) to distribute copies ... of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease or lending;
- (4) in the case of ... motion pictures and other audiovisual works, to perform the copyrighted work publicly."

16. Because direct proof of copying is rarely available, "courts have permitted a finding of copying from evidence that the defendant had access to the copyrighted work and that the defendant's work is substantially similar to plaintiff's." Stern v. Omni, supra, Slip. op. 9. Evidence of both elements is present here.

17. Proof of access consists simply of proving that defendant or its supplier had "the opportunity to copy." 3 Nimmer Section 13.02[A], p. 13-10. In that regard, Artic's president admitted that Artic began selling PUCKMAN printed circuit boards after he first became aware of the Namco PUCKMAN game in Japan (F/F 80, 81); and first became aware of the GALAXIAN speed-up kit several months after he became aware of Midway's GALAXIAN video game. (F/F 57, 58).

18. The fact that Artic first began selling GALAXIAN speed-up kits and PUCKMAN printed circuit boards after Midway's GALAXIAN and PAC-MAN video games had been widely distributed,

also establishes access by virtue of a reasonable opportunity to copy the games. Nimmer Section 13.02[A], p. 13-12. At the ITC hearing, it was demonstrated that the Artic PUCKMAN board contains an error appearing in Midway's PAC-MAN game. (F/F 84). This confirms access to Midway's work by Artic's supplier. 3 Nimmer Section 13.02[B], p. 13-13.

19. At the hearing before this Court, unrebutted expert testimony was introduced to establish that the instructions (in the form of computer program "source code") in the EPROMs of the Artic GALAXIAN speed-up kit must have been derived from the instructions of the instruction ROMs of the GALAXIAN piggyback printed circuit board. (F/F 72). This is direct evidence of access.

20. As was observed by this Court, the audiovisual features of the "PUCKMAN" video game produced by Artic's "PUCKMAN" printed circuit board are virtually identical to those of Midway's PAC-MAN video game. (F/F 84). In this regard, the observation of the Court in Midway Mfg. Co. v. Drikschneider, supra, Slip. op. 18, 19, with respect to similar evidence is apposite:

"It cannot be overemphasized that, in virtually every detail, the defendants' games are identical to the plaintiff's. See Sid & Marty Krofft Television v. McDonald's Corp., supra, 562 F.2d at 1164. See also Franklin Mint Corp. v. National Wildlife Art Exchange, supra, 575 F.2d at 65-66.

In addition to specific similarities, the overall appearance of the game is identical. A reasonable observer, comparing the overall appearances of these

games, could only conclude that the defendants' games not only copy plaintiff's ideas, but capture the plaintiff's unique expression of those ideas. See generally, Durham Industries, Inc. v. Tomy Corp., supra, 630 F.2d at 911-13; Sid & Marty Krofft Television v. McDonald's Corp., supra, 562 F.2d at 1164-65; Universal Athletic Sales Co. v. Salkeld, 511 F.2d 904, 907, 908-09 (3d Cir. 1975); McMahon v. Prentice-Hall, Inc., 486 F. Supp. 1296, 1304 (E.D. Mo. 1980); Dollcraft Industries, Ltd. v. Well-Made Toy Manufacturing, supra, 479 F. Supp. at 1116-17.

In light of the foregoing discussion, the Court finds that the defendants' games are so strikingly similar to the plaintiff's works that a finding of independent origin is precluded. The Court therefore concludes that the defendants' games are copies of the plaintiff's." (Emphasis supplied)

21. The sale of PUCKMAN printed circuit boards by Artic directly violates Midway's exclusive right under 17 U.S.C. Section 106(3) "to distribute copies ... of the copyrighted work to the public." The PUCKMAN printed circuit boards are "copies" of the PAC-MAN audiovisual work under 17 U.S.C. §101, because they are "material objects ... in which a work [PAC-MAN] is fixed ... and from which the work can be perceived ... with the aid of a machine."

22. Artic has contributed to the infringement by others who assemble the printed circuit boards into complete video games, because such complete video games constitute copies "from which the work can be perceived ... directly", thus violating 17 U.S.C. Section 106(1). In addition, Artic has contributed to and induced the assembly and performance by others for profit of copies of Midway's PAC-MAN audiovisual work, violating 17 U.S.C. Section 106(1) and (4). Indeed, the

assembly and operation of video games which incorporated Artic's PUCKMAN printed circuit boards has been enjoined in Midway v. Sol Tabb, et al., supra.

23. As this Court recognized on page 12 of its June 2, 1981, MEMORANDUM OPINION, "there does exist a cause of action for contributory infringement" of a copyright. Gershwin Publishing Corp. v. Columbia Artists Management, Inc. 443 F.2d 1159, 1162 (2nd Cir. 1971); Universal Studios, Inc. v. Sony Corp., 480 F. Supp. 429 (C.D. Cal. 1979).

24. The evidence produced by both sides at the hearing removes any doubt there might have been about the nature of the speed-up kit sold by Artic. The evidence shows that the speed-up kit is a small printed circuit board bearing five EPROMs which contain instructions in the form of computer programs for a "sped-up" GALAXIAN game (F/F 67, 68). The speed-up kit was initially advertised by Artic to "speed up" the GALAXIAN video game "to double your GALAXIAN income" (F/F 60), and although Artic subsequently deleted reference to the GALAXIAN mark from its ads after this suit was filed (F/F 64), Artic never advertised its speed-up kit for any other game by name. (F/F 64).

25. This Court observed that when the Artic speed-up piggyback board is plugged into a GALAXIAN mother board, it produces a faster version of GALAXIAN in which the number of aliens leaving the convoy is larger than in Midway's GALAXIAN

and the aliens in the convoy drop more bombs. (F/F 74).
Otherwise, the audiovisual content is identical to Midway's
GALAXIAN video game. Id.

26. On this evidence, alone, Artic is fully liable as
a joint tort feaser for the infringements and unfair activities
resulting from the use of the speed-up kits by its customers.
As stated in Kalem Co. v. Harper Brothers, 222 U.S. 55, 62-63
(1911):

"The defendant not only expected but invoked by
advertisement the use of its films for dramatic
reproduction of the story. That was the most
conspicuous purpose for which they could be used and
the one for which especially they were made. If the
defendant did not contribute to the infringement, it
is impossible to do so except by taking part in the
final act. It is liable on principles recognized in
every part of the law."

27. On pages 18 and 19 of its June 2, 1981,
MEMORANDUM OPINION, this Court recognized that if the Artic
speed-up kit produces a derivative work of the GALAXIAN game,
its sale by Artic would violate Midway's right to make a
derivative work of the GALAXIAN game, unless Artic's speed-up
kit could be "used on a multitude of electronic games." The
evidence, however, shows that the Artic speed-up kit is capable
only of producing a sped-up version of GALAXIAN. (F/F 75-77).
Under no circumstances could the Artic speed-up kit be
described as "a technological breakthrough of general
utility." (June 2, 1981, Opinion, p. 20). Artic's speed-up
kit is physically incompatible with the circuitry of most video

games (F/F 76), and can only produce a version of the sped-up GALAXIAN game on those printed circuit boards with which it is compatible. (F/F 69, 76). It is not by any means a staple article of commerce as that term is defined in Universal Studios, Inc. v. Sony Corporation of America, 480 F.Supp. 429, at 458, 461 and in Rohm and Haas Co. v. Dawson Chemical Co., 599 F.2d 685 (5th Cir. 1979), cert dis., 100 S.Ct. 495, Reh. den., 101 S.Ct. 40. Thus, it is clear that the Artic speed-up kit is a derivative work of Midway's GALAXIAN audiovisual work, and its sale should be enjoined as violative of Midway's rights under 17 U.S.C. Section 106(2) and (4).

28. Midway's deposit of videotapes was proper under any construction of the law. Although 17 U.S.C. §408(b)(3) requires that the deposit for works such as the GALAXIAN and PAC-MAN video games, which were first published abroad, shall constitute "one complete copy ... as so published," the Copyright Office has taken the consistent position that it does not want actual video games or other bulky three dimensional works for deposit because of the storage problems that the bulky machines would create. E.g., 2 Nimmer on Copyright, §7.17[E][2](d), p. 7-139 (1981). (F/F 50, 51). The deposit of videotape "copies" or "identifying material" of each of Midway's games was in compliance with this policy. (F/F 47-49).

29. To formalize the propriety of videotape deposits in lieu of game units, Midway secured "special relief" through

a letter from the Copyright Office specifically approving this practice (F/F 47, 48, 50), and the Copyright Office has applied this requirement to companies other than Midway. (F/F 51). The evidence developed at the ITC hearing conclusively shows that it has been the consistent policy of the Copyright Office to accept videotape deposits for video game registrations. (F/F 47-51, '54). Thus, actual Copyright Office practice confirms the propriety of Midway's deposits.

30. Testimony at the ITC hearing established that there are no "copyrightable differences" between the U.S. and foreign versions of the GALAXIAN and PAC-MAN video games. (F/F 49). Thus, the requirement that the deposit be of the "first foreign edition" has been met as far as the Copyright Office is concerned.

31. Even if there were some minor deficiencies in the deposits, it would provide no defense to Artic, because "mere technicalities are not allowed to cut down the benefits conferred by the Certificate of Registration." Johnson v. Salomon, 197 U.S.P.Q. 801, 820 (D. Minn. 1977). See also Freedman v. Milnag Leasing Corporation, 20 F.Supp. 803, 804 (S.D.N.Y. 1937) ("It will not do to be overstrict as to the technicalities of the Copyright Act"); Champion Map Corporation v. Twin Printing Co., 350 F.Supp. 1332, 1335 (E.D.N.C. 1971). Similarly, there is a reluctance "to allow a barefaced infringer to avoid liability by invoking an innocent deviation

from the letter of the law that could not in the slightest degree have prejudiced him or the public." Johnson, id., 197 U.S.P.Q. at 821.

32. Although Artic sought to prove at the ITC hearing that Midway somehow misled the Copyright Office in obtaining its first copyright registration for the GALAXIAN video game, it produced no evidence to support its claim. (F/F 52, 53). On the contrary, the evidence shows that Midway's copyright counsel initially sought advice from the Copyright Office as to what would be the proper form of application and deposit to register Midway's copyright in the series of images appearing on the screen of Midway's GALAXIAN video game. (F/F 40-44). Midway's counsel discussed the matter with Copyright Office examiners in the visual arts division and in the performing arts division. (F/F 40). It was the performing arts division examiner who suggested that a performing arts application should be filed and a videotape submitted as a deposit. (F/F 40). His reasons for suggesting the deposit of the videotape are immaterial. Standard Packaging Corp. v. Curwood, Inc., 365 F.Supp. 134, 135 and passim (N.D. Ill. 1973).

33. It is ludicrous to argue, as Artic has, that Midway's actions concerning the deposit of a video tape in the Copyright Office constituted fraud, when the evidence shows that the Copyright Office has adopted a general policy requiring video tapes to be deposited as identifying materials

for video games. (F/F 47-51). As stated in a letter from the Copyright Office:

"A videotape of the audiovisual work embodied in an electronic video game meets the examination and archival requirements of the Copyright Office. It meets the examination needs because it is visually perceptible and therefore can be examined for copyrightability. It meets the archival needs because it is viewable and certifiable." (ITC CRX4) (F/F 51).

Trademark Infringement
And Unfair Competition

34. GALAXIAN and PAC-MAN are fanciful marks. The words are "coined" and do not suggest or describe the goods to which they are applied. J.B. Williams Co., Inc. v. Le Conte Cosmetics, Inc., 523 F.2d 187, 192 (9th Cir. 1975), cert. denied, 429 U.S. 913, 96 S. Ct. 1110, 47 L.Ed. 317 (1976); Stern Electronics, Inc. v. Kaufman, et al., supra, Slip. op. p. 10-12.

35. Because the two marks are distinctive, to establish trademark status Midway need only demonstrate (1) its prior and continuous usage of the GALAXIAN and PAC-MAN trademarks and (2) likelihood of confusion. WGBH Educational Found. v. Penthouse Intern., supra, 453 F. Supp. at 1349-1350. In particular, proof of secondary meaning is not required. Miller Brewing Co. v. G. Heileman Brewing Co., 561 F.2d 75, 79 (7 Cir. 1977).

36. However, there is ample proof of secondary meaning in the two marks even if proof of same were required:

"The basic element of secondary meaning is a mental recognition in buyers' and potential buyers' minds that products connected with the symbol or device emanate from or are associated with the same source." As recognized in this circuit, '[s]econdary meaning has been defined as association nothing more.'" Levi Strauss & Co. v. Blue Bell, Inc., 632 F.2d 817, 820 (9th Cir. 1980), citing Carter-Wallace, Inc. v. Proctor & Gamble Co., 434 F.2d 794, 802 (9th Cir. 1970).

37. Secondary meaning may be proved by evidence of widespread sales and advertising, Levi Strauss, supra, 632 F.2d at 821, evidence of unsolicited news coverage, Harlequin Enterprises Ltd. v. Gulf & Western Corp., 644 F.2d 946, 950 (2d Cir. 1981), and evidence of unsolicited letters from members of the public. All of these different types of evidence are present here. (F/F 25, 30-36). On the present record, there can be no question that the GALAXIAN and PAC-MAN marks have acquired a strong secondary meaning.

38. Midway's prior and continuous use of the GALAXIAN and PAC-MAN trademarks is supported by the evidence. Shortly after it acquired rights in the GALAXIAN and PAC-MAN games, Midway began selling the GALAXIAN and PAC-MAN video games in the United States. Midway acquired by assignment whatever rights Namco had in the GALAXIAN and PAC-MAN trademarks in the United States, (F/F 20, 22). In its June 2, 1981 MEMORANDUM OPINION, this Court recognized that Midway had introduced substantial evidence that it owns the marks in question. No evidence has been offered to rebut evidence of Midway's ownership.

39. Although defendant has argued that others have used the GALAXIAN and PAC-MAN marks, there is no evidence that any of these uses was prior in time to Midway's use. Thus, at best, defendant has introduced evidence that others are infringing Midway's rights. But evidence that others are infringing Midway's rights is irrelevant to the question of Artic's infringement. Tisch Hotels, Inc. v. Americana Inn, Inc., 350 F.2d 609, 614 (7th Cir. 1965).

40. Artic sells its GALAXIAN speed-up kit with the intent that it be used by operators of GALAXIAN video games to "double your GALAXIAN income." (F/F 60). The result intended by Artic is that video game cabinets which prominently display the names GALAXIAN and Midway -- as do all the GALAXIAN games which Midway has sold -- will contain a game which differs from that which was sold by Midway. But the members of the public who play such games have no way of knowing that the "sped-up" GALAXIAN differs from the game sold by Midway. Thus likelihood of confusion (and trademark infringement) is inevitable.

41. The facts are strikingly similar to those in Bulova Watch Co. v. Allerton Co., 328 F.2d 20 (7th Cir. 1964). There the defendants sold watches which contained Bulova watch movements in defendants' watch cases. The Court of Appeals held that the defendants should be enjoined from the use of the trademark Bulova on the recased watches. That Court's reasoning is applicable here:

"The substitution of a different crown and case by defendants results in a different product. The watch is no longer a Bulova watch ." 328 F.2d at 23.

42. Coin operated video games are publicly operated for profit. Midway's reputation and goodwill associated with its name and marks transcends the immediate sale of its games to distributors. Midway's reputation and good will depend upon the acceptance of its products by members of the public who play the games. To permit the sale of kits to modify Midway's games places Midway's reputation in someone else's hands. That, in itself, is irreparable injury and is reason to issue an injunction. AMF, Inc. v. Sleekcraft Boats, 599 F.2d 341, 353-354 (9Cir. 1979).

43. Artic has advertised, "We sell p.c. boards ... for Hot Video Games." (F/F 82). Midway's PAC-MAN video game is undeniably one of the hottest games on the market. Artic has sold a printed circuit board under the name PUCKMAN which produces a game identical to Midway's PAC-MAN game. (F/F 81, 82). The mark PUCKMAN is virtually identical in sight and sound to PAC-MAN, and there can be no question that its use on identical products is likely to cause confusion.

A. Product Simulation In Violation
Of Lanham Act Section 43(a)

44. Section 43(a) of the Lanham Act, 15 U.S.C.

Section 1125(a), provides in relevant part as follows:

"Any person who shall affix, apply, or annex, or use in connection with any goods or services, or any

container or containers for goods, a false designation of origin, or any false description or representation, ... and shall cause such goods or services to enter into commerce, ... shall be liable to a civil action ... by any person who believes that he is or likely to be damaged by the use of any such false description or representation."

45. This section is "clearly remedial and should be broadly construed." CBS Inc. v. Springboard Intern. Records, 429 F. Supp. 563, 566 (S.D.N.Y. 1976).

46. The elements of a Section 43(a) violation in a case involving video games are as follows:

"(1) that the plaintiff's games have nonfunctional design features; (2) that these design features have acquired secondary meaning; and (3) that defendants' use of these features is likely to cause confusion in the market place." Midway Mfg. Co. v. Drikschneider, supra, slip. op. 21.

47. The design features of the visual images in the audiovisual works of Midway's PAC-MAN game include innumerable nonfunctional features, including all of the colors, shapes and movements appearing on the video screens of the game. (F/F 39-40). Imitation of these features in a game similar to that produced by Artic's PUCKMAN printed circuit board was held to violate Section 43(a) in Midway Mfg. Co. v. Drikschneider, supra, slip. op. 21-30.

48. Product simulation has repeatedly been enjoined in other types of cases as a violation of Section 43(a). In Truck Equipment Services Co. v. Fruehauf Corp., 536 F. 2d 1210, 1215 (8th Cir. 1976), cert. denied, 429 U.S. 861, 97 S. Ct. 164, 50 L.Ed. 2d 139 (1976), the plaintiff originated a

distinctive exterior design for a hopper grain trailer. Defendant's incorporation of this shape in the design of its own trailers was found to be in violation of Section 43(a). Similarly, in Dallas Cowboys, Etc. v. Pussycat Cinema, Ltd., 604 F.2d 200, 203 (2d Cir. 1979), the particular colors and collocation of decorations that distinguish the uniforms of the Dallas Cowboys Cheerleaders were protected from appropriation under Section 43(a). In Bulk Manufacturing Co. Inc. v. Schoenback Products Co. Inc., 208 U.S.P.Q. 664 (S.D.N.Y. 1980) the defendants were preliminarily enjoined from selling certain vending machines for which young people were the principal consumers and which were "virtually identical in appearance" to plaintiff's vending machines which plaintiff had promoted with over \$50,000 worth of advertising. See Also, Rolls-Royce Motors Ltd. v. A. & A. Fiberglass, Inc., 428 F. Supp. 689, 698 (N.D. Ga. 1977) (design of grille and statuette of Rolls-Royce automobile); Rolls-Royce Motors Ltd. v. Custom Cloud Motors, Inc., 190 U.S.P.Q. 80, 81 (S.D.N.Y. 1976) (same); Fotomat Corp. v. Cochran, 437 F.Supp. 1231, 1245 (D. Kan. 1977) (shape of building for retail photo-developing outlets).

49. The "speed-up kit" manufactured and sold by Artic is expressly intended to alter the carefully designed play of the GALAXIAN game. (F/F 64). Accelerating the action appearing on the GALAXIAN screen and multiplying the number of

"aliens" swooping down to bomb the friendly rocket, the "memory board" significantly distorts the game. (F/F 74). Artic's deformation of a multimillion-dollar game is violative of Lanham Act Section 43(a), which prohibits inter alia, the "false designation of origin" of goods in commerce. 15 U.S.C. §1125(a).

50. The mutilation of the GALAXIAN game affectuated by Artic's speed-up kit creates a "false designation of origin" by suggesting that the sped-up version of the game emanates from Midway in its altered form. This violates Midway's right to prevent the presentation of [its] work to the public in a distorted form." Follett v. New American Library, Inc., 497 F. Supp. 304, 313 (S.D.N.Y. 1980). In essence, it places Midway's reputation in the hands of those who alter the games.

51. Illustrative is Gilliam v. American Broadcasting Companies, Inc., 538 F.2d 14 (2d Cir. 1976). Plaintiffs in Gilliam were a group of British writers and performers known as "Monty Python" who had authorized the sale of some of their British television shows to defendant, an American television network. Instead of broadcasting them in their original form, however, defendant edited them into a form that departed substantially from the original work. Gilliam, id., 538 F.2d at 24. Defendant's distortion of plaintiff's works was thus held to violate Section 43(a), and plaintiff's application for a preliminary injunction restraining the broadcast of the altered shows was granted.

52. Artic's conduct in the case at bar is far more egregious than that of the defendant network in Gilliam. There the network had the right to broadcast the subject works in their unaltered form. By copying Midway's GALAXIAN game without authorization and then distorting it, Artic has added insult to the injury created by simple appropriation. Its conduct is thoroughly impermissible under Section 43(a).

53. The distortion of a creative work is enjoicable under Illinois law as well as the Lanham Act. Thus in Bonner v. Westbound Records, Inc., 49 Ill. App. 3d 543, 364 N.E. 2d 570, 7 Ill. Dec. 409 (1st Dist. 1977), plaintiff musicians claimed that defendant record company took unedited tapes of plaintiffs' performances and "overdubbed" new music and new words into plaintiffs' performances.

54. The alteration of plaintiffs' performances was a deceptive trade practice under Illinois' Deceptive Trade Practices Act, Ch. 121-1/2 Ill. Rev. Stat. par. 312 (1975). Bonner, id., 364 N.E. 2d at 574. In reasoning reminiscent of the Lanham Act, the Court stated that:

"An author or artist is entitled to judicial protection where there is a sufficient demonstration of 'mutilation' or other serious alteration of the creator's work." Bonner, id., 365 N.E. 2d at 575.

55. The applicability of this doctrine to the instant case is clear. Artic's GALAXIAN speed-up kits -- whose sole use is to deform Midway's GALAXIAN game -- are manifest violations of the Illinois law. See also Clemens v. Belford, Clark & Co., 14 F. 728, 731 (C.C.N.D. Ill. 1883).

56. The Artic device for simulating the PAC-MAN game does not distort the play of Midway's game, but it is nonetheless in violation of Illinois law. Artic's PAC-MAN circuit board may be used to convert existing video games into the PAC-MAN game by replacing the existing circuitry with the Artic product. Thus, the replacement device is to be used in a cabinet designating a game other than PAC-MAN. Such "palming off" is a classic example of common-law unfair competition. See, e.g., Baldassano v. Accettura, 336 Ill. App. 445, 84 N.E. 2d 336 (1st Dist. 1949). See also Midway Mfg. Co. v. Drikschneider, supra, Slip. op. 24. By designedly enabling game owners to palm off the PAC-MAN game as a different product, Artic is responsible for such tortious acts. Pennwalt Corp. v. Zenith Laboratories, Inc., 472 F. Supp. 413, 418 (E.D. Mich. 1979).

B. Irreparable Injury

57. Copyright infringement automatically divests the copyright proprietor of exclusive control over his unique intellectual property. Accordingly, upon a showing of infringement, irreparable injury is ordinarily presumed. Novelty Textile Mills, Inc. v. Joan Fabrics Corp., 558 F.2d 1090, 1094 (2d Cir. 1977); American Metropolitan Ent. of N.Y. v. Warner Bros. Records., 389 F.2d 903, 905 (2d Cir. 1968). Dawn Associates v. Links, 203 U.S.P.Q. 831, 834 (N.D. Ill. 1978). As stated in Reuben H. Donnelley v. Guides to

Multinational Business, 193 U.S.P.Q. 791, 792 (N.D. Ill. 1976), "[i]rreparable damage to the plaintiff is inherent in acts of copyright infringement."

58. There is also a presumption that a violation of Lanham Act §43(a) creates injury not compensated by monetary damages. Midway Mfg. Co. v. Drikschneider, supra, Slip. op.

29. National Lampoon, Inc. v. American Broadcasting Cos., Inc., 376 F.Supp. 733, 750 (S.D.N.Y. 1974), aff'd, 497 F.2d 1343 (2d Cir. 1974).

59. Illinois law echoes the automatic inference of irreparable injury subsisting under federal law. Given Midway's likelihood of success on the merits under the Deceptive Trade Practices Act, "it necessarily follows that irreparable harm has been demonstrated." Bonner v. Westbound Records, Inc., 49 Ill. App. 3d 543, 364 N.E. 2d 570, 576, 7 Ill. Dec. 409 (1977).

60. Apart from the presumed irreparable injury that exists in virtually every copyright case, the traditional considerations which activate the intervention of equity to restrain infringement are fully present in the case at bar. It has been held that the presence of infringing goods on the market drastically destroys the salability and value of the original goods. United Merchants and Manufacturers, Inc. v. Sutton, 282 F.Supp. 588, 591 (S.D.N.Y. 1968).

61. The detrimental impact of infringing goods is aggravated in regard to recreational and entertainment-oriented products, such as GALAXIAN and PAC-MAN that have a limited span of public popularity and sales potential also constitutes irreparable harm. Dollcraft Industries, Ltd. v. Well-Made Toy Mfg., 479 F.Supp. 1105, 1117 (E.D.N.Y. 1978); Leon B. Rosenblatt Tex. Ltd. v. M. Lowenstein & Sons, Inc., 321 F. Supp. 186, 189 (S.D.N.Y. 1970). To prevent the diversion of Midway's profits during these potentially abbreviated sales life of Midway's games, it is imperative to restrain defendants' further copyright infringement. Midway Mfg. Co. v. Dirkschneider, supra, Slip. op. at 20.

62. Midway enjoys a reputation for producing high-quality video games, and this reputation is entitled to protection from association with a video game that does not meet the standards of Midway's products. Dallas Cowboys, etc. v. Pussycat Cinema, Ltd., 604 F.2d 200, 205 (2d Cir. 1979); Paramount Pictures Corp. v. Worldwide Entertainment Corp., 195 U.S.P.Q. 539, 543 (S.D.N.Y. 1977). This is especially true in the case of the speed-up kit sold by Artic. The difficulty Midway would encounter in calculating the monetary value of its lost business with accuracy also makes damages an inadequate remedy at law.

63. In short, the evidence before the Court is more than sufficient for the "minimal showing" of irreparable injury required in this case.

C. The Balance of Equities Favors Midway

64. Continuation of Artic's acts will jeopardize Midway's ability to continue manufacturing and selling two games in which it has invested millions of dollars. Artic's product line is changeable and varied. Indeed, Artic's president testified that Artic has a substantial business in the sale of integrated circuits (F/F 56), that the speed-up kit is "not a substantial part of Artic's business" (F/F 91), and that Artic sells printed circuit boards for about 30 games (F/F 90). Thus, Artic will suffer little or no injury by discontinuing the infringing products. Thought Factory, Inc. v. Idea Factory, Inc., 203 U.S.P.Q. 331, 335 (C.D. Cal. 1978). Complimenting this disproportionate balance of hardships, it is apparent that the status quo is best preserved if the contested acts of Artic cease.

D. It Is In The Public Interest To Grant The Injunction

65. Complementing the panoply of irreparable injuries that Midway will sustain unless defendants' acts of infringement are restrained is the injury that the public will continue to suffer in the form of confusion created by exposure to video games which are substantially identical to Midway's GALAXIAN and PAC-MAN games. Midway Mfg. Co. v. Drikschneider, supra, Flip. Op. at 20-21; Dealer Advertising v. Barbara Allan Financial, 197 U.S.P.Q. 611, 619 (W.D. Mich. 1977). There is

no public interest in permitting Artic to continue its acts of plagiarism and deception of the public.

66. A preliminary injunction will issue against Artic International, Inc.

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